Express Mail No.: EL615431547US Date Mailed: May 10, 2004

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In e application of:

Kong-Chang Liang, et al.

Appl. No. 10/718,990

Filed: November 21, 2003

For:

TRANSMISSIVE OR REFLECTIVE

LIQUID CRYSTAL DISPLAY AND

NOVEL PROCESS FOR ITS

MANUFACTURE

Art Unit: 1712

Examiner: Not Yet Assigned

Atty. Docket: 07783.0013.NPUS00

Confirmation No.: 9111

Information Disclosure Statement

MS AMENDMENT Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

Listed on accompanying Form PTO-1449 are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98.

Where the publication date of a listed document does not provide a month of publication, the year of publication of the listed document is sufficiently earlier than the effective U.S. filing date and any foreign priority date so that the month of publication is not in issue. Applicants have listed publication dates on the attached PTO-1449 based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

This statement should not be construed as a representation that a search has been made, or that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith. It is further understood that the Examiner will consider information that had been cited by or submitted

to the U.S. Patent and Trademark Office in a prior application relied on under 35 U.S.C. § 120. 1138 OG 37, 38 (May 19, 1992).

Applicants have checked the appropriate boxes below.

- 1. This Information Disclosure Statement is being filed;
 - □ a. Within three months of the U.S. filing date of a national application other than a continued prosecution application under §1.53(d);
 - □ b. Within three months of the date of entry of the national stage as set forth in §1.491 in an international application;
 - c. Before the mailing date of a first Office Action on the merits;
 - □ d. Before the mailing of a first Office Action after filing of a request for continued examination under § 1.115.

No statement under 37 C.F.R. § 1.97(e) or fee is required.

or;

- □ 2. This Information Disclosure Statement is being filed after the period specified in paragraph 1(a)-1(d) above, but before the mailing date of a Final Rejection or Notice of Allowance, or action that otherwise closes prosecution in the application, and
 - □ a. I hereby state that each item of information contained in this Information Disclosure

 Statement was first cited in any communication from a foreign patent office
 in a counterpart foreign application not more than three months prior to the
 filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1), or
 - □ b. I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to my knowledge after making reasonable inquiry, no item of information contained in this Information Disclosure Statement was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2), or
 - □ c. Attached is our Check No. _____ in the amount of \$ ____ in payment of the fee under 37 C.F.R. § 1.17(p).

□ 3.	This Information Disclosure Statement is being filed more than three months after the U.S.
	filing date and after the mailing date of a Final Rejection or Notice of Allowance, but
	on or before payment of the Issue Fee. Attached is our Check No in the
	amount of \$ in payment of the fee under 37 C.F.R. § 1.17(i), and
	□ a. I hereby state that each item of information contained in this Information Disclosure
	Statement was first cited in any communication from a foreign patent office
	in a counterpart foreign application not more than three months prior to the
	filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1), or
	□ b. I hereby state that no item of information in this Information Disclosure Statement
	was cited in a communication from a foreign patent office in a counterpart
	foreign application, and, to my knowledge after making reasonable inquiry,
	no item of information contained in this Information Disclosure Statement
	was known to any individual designated in 37 C.F.R. § 1.56(c) more than
	three months prior to the filing of this Information Disclosure Statement. 37
	C.F.R. § 1.97(e)(2).
□ 4.	Relevance of the non-English language document(s) is discussed in the present specification.
□ 5.	The document(s) was/were cited in a corresponding foreign application. An English
	language version of the foreign search report is attached for the Examiner's
	information.
□ 6.	A concise explanation of the relevance of the non-English language document(s) appears
	below:
□ 7.	The Examiner's attention is directed to co-pending U.S. Patent Application No,
	filed, which is directed to related technical subject matter. The
	identification of this U.S. Patent Application is not to be construed as a waiver of
,	secrecy as to that application now or upon issuance of the present application as a
	patent. The Examiner is respectfully requested to consider the cited application and
	the art cited therein during examination.
□ 8.	Copies of the documents were cited by or submitted to the Office in Application No.
	, filed, which is relied upon for an earlier filing date under 35

Attorney Docket No. 07783.0013.NPUS00 Appl. No. 10/718,990

U.S.C. § 120. Thus, copies of these documents are not attached. 37 C.F.R. § 1.98(d).

It is respectfully requested that the Examiner initial and return a copy of the enclosed PTO-1449, and to indicate in the official file wrapper of this patent application that the documents have been considered.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 08-3038 referencing docket number 07783.0013.NPUS00.

Respectfully submitted,

Date: May 10, 2004

Viola T. Kung (Reg. No. 41,131)

HOWREY SIMON ARNOLD & WHITE, LLP

301 Ravenswood Avenue Box No. 34 Menlo Park, CA 94025 Tel: (650) 463-8181

Fax: (650) 463-8400

INFORMATION DISCLOSURE CITATION

SUPPLEMENTAL PTO-1449

ATTY. DOCKET NO. SERIAL NO. 07783.0013.NPUS00 10/718,990

APPLICANT : Rong-Chang Liang, et al.

FILING DATE GROUP

11/21/2003 1712

•		U.S. P.	ATENT DOCUMENT	TS		
EX'R INITIAL	PARENT NO.	DATE MM-YYYY	NAME	CLASS	SUBCLASS	FILING DATE
	09/759,212 (WO 02/056097)	11-2001 (07-2002)	Liang, et al			
	US 2002-75556 (09/942,532)	06-2002 (08-2001)	Liang, et al			
	USSN 09/518,488	Filed 03/03/2000	Liang et al			
	USSN 10/444,760	Filed 05/23/2003	Liang et al			
	USSN 10/388,890	Filed 03/14/2003	Liang et al			
	USSN 10/372,027	Filed 02/21/2003	Liang et al			
	USSN 10/351,460	Filed 01/24/2003	Liang et al			
	2002/0196525	12/26/2002	Chen et al.			
	2002/0188053	12/12/2002	Zang et al.			
	2002/0029969	03/14/2002	Yager et al.			., ,
	2002/0018043	02/14/2002	Nakanishi			
·	3,229,607	01/18/1966	Battaglia			
	3,612,758	10/12/1971	Evans			
	3,668,106	June 1972	Ota			
	3,689,346	09/05/1972	Rowland			
	3,885,964	05/27/1975	Nacci			
	3,908,052	09/23/1975	Sanders			
	3,928,671	Dec 1975	Robusto et al			
	4,071,430	Jan 1978	Liebert			
	4,093,534	June 1978	Carter et al			
	4,190,352	02/26/1980	Bruning			

			· · · · · · · · · · · · · · · · · · ·		Direct 2 01
	4,285,801	Aug 1981	Chiang		
	4,680,103	July 1987	Beilin Solomon I et al		
	4,741,604	05/03/1988	Kornfeld		
	4,741,988	May 1988	Van der Zande et al		
	4,891,245	Jan 1990	Micale		
	4,924,257	05/08/1990	Jain		
	5,200,120	04/06/1993	Sakai		
	5,274,481	12/28/1993	Kim		
	5,276,438	Jan 1994	DiSanto et al		·
1	5,279,511	01/18/1994	DiSanto et al	·	
	5,285,236	02/08/1994	Jain		
·	5,380,362	Jan 1995	Schubert		
	5,398,041	03/14/1995	Hyatt		
	5,403,518	Apr 1995	Schubert		
	5,432,526	07/11/1995	Hyatt		
	5,450,220	09/12/1995	Onishi et al.		
	5,480,938	Jan 1996	Badesha et al		
	5,573,711	Nov 1996	Hou et al		
	5,589,100	12-1996	Grasso, et al		
	5,589,100	12/31/1996	Grasso et al.		
	5,652,645	07/29/1997	Jain		
	5,699,097	Dec 1997	Takayama et al		
	5,731,860	03/24/1998	Harada et al.		
	5,739,889	04/14/1998	Yamada et al.		
	5,835,174	11-1998	Clikeman, et al		
-	5,835,174	11/10/1998	Clikeman et al.		
	5,843,333	12/01/1998	Hakemi		
	5,877,848	03/02/1999	Gillette et al.		
	5,895,541	04/20/1999	Kobayashi et al.		
	5,914,806	Jun 1999	Gordon II et al		
	5,930,026	July 1999	Jacobson et al		
	5,942,154	08/24/1999	Kim et al.		
	5,943,113	Aug 1999	Ichihashi		
	5,956,112	09/21/1999	Fujimori et al.		
	5,961,804	Oct 1999	Jacobson et al		

				Sheet 5 of
	5,967,871	Oct 1999	Kaake et al	
	5,976,405	11-1999	Clikeman, et al	-
	5,976,405	11/02/1999	Clikeman et al.	
	5,978,062	Nov 1999	Liang et al	
	5,985,084	11/16/1999	Summersgill et al.	
	5,995,190	11/30/1999	Nagae et al.	
	6,017,584	Jan 2000	Albert et al	
	6,018,383	01/25/2000	Dunn et al.	
	6,037,058	03-2000	Clikeman, et al	
	6,037,058	03/14/2000	Clikeman et al.	
	6,064,508	May 2000	Forgette et al	
	6,067,185	May 2000	Albert et al	
	6,113,810	Sep 2000	Hou et al	
	6,113,836	09/05/2000	Sakai et al.	
	6,120,588	Sep 2000	Jacobson	
	6,120,839	Aug 1998	Comiskey et al	
	6,120,946	9/19/2000	Johnson et al.	
	6,166,797	12/26/2000	Bruzzone et al.	
	6,172,798	Jan 2001	Albert et al	
	6,184,856	Sep 1998	Gordon II et al	
	6,191,250	02/20/2001	Aida et al.	
	6,239,896	May 2001	Ikeda	
	6,312,304	Nov 2001	Duthaler et al	
	6,319,381	Nov 2001	Nemelka	
	6,327,072	Dec 2001	Comiskey et al	
•	6,337,761	Jan 2002	Rogers et al	
	6,392,785	May 2002	Albert et al	
	6,392,786	May 2002	Albert	
	6,400,430	Jun 2002	Nakao et al	
	6,400,492	06/04/2002	Morita et al.	
	6,512,626	01/28/2003	Schmidt	
	6,514,328	02/04/2003	Katoh et al.	- "
	6,525,865	Feb 2003	Katase	
	6,652,075	Nov 2003	Jacobson	
	6,672,921	Jan 2004	Liang et al	
T			<u> </u>	

Sheet 4 of 6

						Sł	neet 4 c	
	20020075556	06/20/2002	Liang et al					
	20020131152	09/19/2002	Liang et al					
	20020182544	12/05/2002	Chan-Park, et al.					
	20030007238	01/09/2003	Liang et al					
	20030039022	02/27/2003	Liang et al					
-	20030053190	03/20/2003	Liang et al	-				
		FOREIGN	N PATENT DOCUMENTS		l	1		
EX'R	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	TRANS	TRANSLATION	
INITIAL		MM-YYYY				YES	NO	
	CA 2,340,683	Nat'l Entry 2/14/2001	Canada (Schmidt, F. G.)	•		\boxtimes		
	DE 199 27 359.6	Pub. Date 12/21/00	Germany ¹ (Schmidt, F. G.)					
	EP 0 990 942	Pub Date 04/05/2000	Europe (Yamanaka)					
	EP 1 065 553	Pub Date 01/03/2001	Europe (Ogawa)					
	EP 1 089 118	Apr 2001	EPO					
	EP 1 195 603	Pub Date 04/10/2002	Europe (Kawai)					
	JP 6242423	Pub Date 09/02/1994	Japan (Nakai Yuichi) (English abstract included)					
	JP 64-86116	Pub Date 03/30/1989	Japan (Osamu et al) (English abstract included)	,			\boxtimes	
	JP 60-205452	Pub Date 10/17/1985	Japan (Hisanori) (English abstract included)					
	JP 2000 035677	Pub Date 02/02/2000	Japan (English abstract included)				×	
	JP 2000 075497	Pub Date 03/14/2000	Japan (English abstract included)				\boxtimes	
	JP 2001 042118	Pub Date 02/16/2001	Japan (English abstract included)					
	JP 2001 056653	Pub Date 02/27/2001	Japan (Hayakawa) (English abstract included)				\boxtimes	
	JP 02284126	Pub Date 11/21/1990	Japan (Oshiro) (English abstract included)					
	JP 59171930	Sep 1984	Japan (English abstract included)					
	JP 02284125	Nov 1990	Japan (English abstract included)					

Sheet 5 of 6

	JP 02223934	Sep 1990	Japan (English abstract included)				
	JP 57104116	Jun 1982	Japan (English abstract included)				
	JP 62-203123	Pub Date Sep 1987	Japan (English abstract included)				
	WO 98/57226	Dec 1998	PCT				
	WO 99/08151	Pub Date 02/18/1999	PCT (Bruzzone et al.)				
	WO 99/53373	Pub Date 10/21/1999	PCT (Drzaic)				
	WO 99/56171	Nov 1999	PCT				
	WO 00/03291	Pub Date 01/20/2000	PCT (Jacobson et al.)				
	WO 00/36649	Jun 2000	PCT				
-	WO 00/60410	Oct 2000	PCT .				
	WO 00/77571	Pub Date 12/21/00	PCT ¹ (Schmidt, F. G.)				\boxtimes
	WO 01/67170	Pub Date 09/13/2001	PCT (Liang et al.)				
	WO 02/01281	Pub Date 01/03/2002	PCT (Liang et al.)				
	WO 02/56097	Pub Date Jul 2002	PCT (erroneously identified as WO 02/56079 on page 3 of Spec.)				
	WO 02/65215	Aug 2002	PCT				
	WO 03/19280	Mar 2003	PCT				
	OTHER DOCUM	ENTS (Includi	ng Author, Title, Date, P	ertinent P	ages, Etc.)		
EX'R INITIAL	DOCUMENT						
	Bryning et al., "37.4: Reverse-Emulsion Electrophoretic Display (REED)" SID 98 Digest pp. 1018-1021 (1998)						
	Comiskey et al, "An Electrophoretic Ink for All-printed Reflective Electronic Displays", Letters to Nature, MIT, The Media Laboratory, 20 Ames Street, Cambridge, MA 02139-4307, USA, May 1998, pp-253-255						
	Dalisa, A. L., "Electrophoretic Display Technology", IEEE Trans. Electron Devices, pp-827-834 (1977)						
•	Drzaic, P.S., "Liquid Crystal Dispersions", 1995.						
	Drzaic, P.S., "Liquid Crystal Dispersions", The PDLC Paradigm, pp 1-9, (1995)						
	Harbour, J. R., "Subdivided Electrophoretic Display" Xerox Disclosure Journal, US Xerox Corporation, Stamford, Conn., 4(6):705, November 1979, XP002123212						
	Harvey, T.G., "Replication Techniques for Micro-optics", SPIE Proc., Vol. 3099, pp-76-82 (1997)						
	Hopper, M. A. et al, "An on Electron Devices, 26(c Display, its Properties, Mo (1979)	del and Add	dressing", IEEE	Transact	ions
	Inoue, S. et al., "High Resolution Microencapsulated Electrophoretic Display (EPD) Driven by Poly-Si TFTs With Four-Level Grayscale" <i>IEEE Transactions on Electron Devices</i> 49(8), pp-1532-1539 (2002)						FTs
	Kazlas, P. et al., "12.1: 12.1" SVGA Microencapsulated Electorphoretic Active Matrix Display for Information Applicances" SID 01 Digest 152-155 (2001)						
	Kishi, E et al, "5.1 Development of In-Plane EPD", Canon Research Center, SID 00 Digest, pp-24-27						

	Sheet 0 01
	Lewis, J.C., "Electrophoretic Displays", Allen Clark Research Centre, The Plessey Company Ltd., Caswell, Towcester, Northants, England, pp-223-240
	Matsuda Y. "Newly designed, high resolution, active matrix addressing in plane EPD" IDW 02 EP2-3 1341-1344 (2002)
	Murau and Singer, "The Understanding and Elimination of Some Suspension Instabilities in an Electrophoretic Display", Philips Laboratories, Briarcliff Manor, NY 10510, April 10, 1978, J. Appl. Phys. 49(9), pp-4820-4829
	Nakamura, et al, "Development of Electrophoretic Display using Microencapsulated Suspension", NOK Corporation, Kanagawa, Japan & NOK Corporation, Ibaraki, Japan, SID 98 Digest, pp-1014-1017
	Ota et al., "Developments in Electrophoretic Displays" Proc. of SID, Vol. 18/3&4, pp-243-254 (1977)
	Ota, et al., "Electrophoretic Image Display (EPID) Panel, "Wireless Research Laboratory, Matsushita Electric Industrial Company, Ltd., Osaka, 571, Japan, received Feb 7, 1973, pp-832-836, July 1973
	Singer, B. et al, "X-Y Addressable Electrophoretic Display", Proc. SID 18(3/4), pp-255-266 (1977)
	Slafer, W. D. et al, "Continuous Manufacturing of Thin Cover Sheet Optical Media", SPIE Proc., Vol. 1663, pp-324-335 (1992)
	Swanson et al., "5.2: High Performance Electrophoretic Displays" SID 00 Diges, pp-29-31 (2000)
	Allen, K. « Electrophoretics Fulfilled », Emerging Displays Review, iSuppli Corporation, Oct. 2003, pp 9-14
	Chen, S.M., « The Applications for the Revolutionary Electronic Paper Technology », OPTO News & Letters, 2003, July, 102, pp 37-41 (in Chinese, English abstract attached, full translation available upon request)
	Zang, H.M. and Liang, R.C., « Microcup Electronic Paper by Roll-to-Roll Manufacturing Processes », Spectrum, 2003, Summer, 16/2, pp16-21
	Liang, R.C. and Lee, H., « SiPix Microcup(R) Electronic Paper – An Introduction », Advanced Display, 2003, June, Issue 3, pp 4-9 (in Chinese, English abstract attached, full translation available upon request)
	Liang, R.C. et al, « Microcup(R) Active and Passive Matrix Electrophoretic Displays by A Roll-to-Roll Manufacturing Processes », SID Digest, May 21-22, 2003, 20.1/R.C. Liang
	Chen, S.M., « The New Applications and the Dynamics of Companies », TRI, May, 2003 (in Chinese, English abstract attached, full translation availabe upon request)
	Liang, R.C. et al, « Microcup(R) displays : Electronic Paper by Roll-to-Roll Manufacturing Processes », Journal of the SID, Vol. 11/4, Feb. 18-23 2003, pp 621-628
	Liang, R.C. et al, « Passive Matrix Microcup(R) Electrophoretic Displays », IDMC '03, Feb. 18-21, Taipei, Liang, Paper Fr-17-5
•	Liang, R.C. and Tseng, S., « Microcup(R) LCD, A New Type of Dispersed LCD by A Roll-to-Roll Manufacturing Process », IDMC '03, Feb. 18-21, Taipei, Liang, Paper We-02-04
	Liang, R.C., « Microcup(R) Electrophoretic and Liquid Crystal Displays by Roll-to-Roll Manufacturing Processes », USDC Flexible Microelectronics & Displays Conference, Feb. 3-4, 2003, Phoenix, Arizona, USA.
	Liang, R.C. et al, « Microcup Electrophoretic Displays by Roll-to-Roll Manufacturing Processes », IDW '02, December 4-6, pp1337-1340
EXAMINER	DATE CONSIDERED:

EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to

*If an asterisk is placed beside the reference number, a copy is not provided because the reference was previously cited by or submitted to the PTO in a prior application that is identical in the statement and relied upon for an earlier filing date under 35 U.S.C. §120. 37 C.F.R. §1.98 (d).